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Scion and stock.—By grafting *Nicotiana Tabacum* on *N. affinis* (which contains little or no nicotin), and *N. affinis* on *N. Tabacum*, GRAFE and LINSBAUER have succeeded in showing,[11] in a more convincing way than before, the effect of the scion on the stock in respect to products of metabolism. Nicotin was found abundantly in *N. affinis*, whether it was functioning as stock or scion. Indeed, it attained almost the maximum amount found in *N. Tabacum* and scarcely fell below the limits of variation in that species. When *N. Tabacum* was the stock, and the scion, *N. affinis* was cut away completely, the new shoots produced contained even less nicotin than the *N. affinis* leaves had; so that the authors believe the scion had even increased the capacity of the *N. Tabacum* stock to form this alkaloid. Further researches are in progress.—C. R. B.

Tobacco.—In a long and somewhat controversial paper, excellently illustrated by halftones of various races of tobacco, ANASTASIA[12] concludes that there are four varieties within which may be grouped all the races of commerce. Three of these, vv. *havanensis*, *brasiliensis*, and *virginica*, are the offspring of *Nicotiana Tabacum*, and one owes its origin to hybridization between *N. Tabacum* and an unknown species of Nicotiana. Dr. ANASTASIA is desirous of securing seeds of certain races cultivated in the U. S. We bespeak the cooperation of those living in tobacco-raising sections. He may be addressed at the Experiment Station, Scafati, Salerno, Italy.—C. R. B.

Phototropism.—Further proof that the epidermal cells of phototropic leaves act as lenses, thus enabling them to function as receptive organs for adjustments to light, is adduced by HABERLANDT[13]. On covering young leaves of *Begonia semperflorens* with a layer of water, held in place by thin mica, he found no response to oblique light, though control leaves had attained the usual transverse posture, and the water-covered leaves gained it, though not perfectly, after removal of the layer of water.—C. R. B.

Solution cultures.—BREAZEALE[14] finds that transpiration and size of wheat seedlings are increased by the presence of sodium in nutrient solutions containing all other necessary elements. Further, the previous presence of sodium in a nutrient solution decreases the amount of potassium entering the plant during a subsequent period. The paper shows very little consideration for the reader. RAYMOND H. POND.

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[12] ANASTASIA, G. EMILIO, Le varietà typiche della *Nicotiana Tabacum* L. R. Istituto Sperimentale Tabacchi in Scafati. Ministero delle Finanze. Imp. 8vo. pp. 122. *figs.* and *plates 31*. 1906.

[13] HABERLANDT, G., Ein experimentaler Beweis für die Bedeutung der papillosen Laubblattepidermis als Lichtsinnesorgan. Ber. Deutsch, Bot. Gesells. **24**:361–6. 1906.

[14] BREAZEALE, J. F., The relation of sodium to potassium in soil and solution cultures. Journ. Amer. Chem. Soc. **37**:1013–1025. 1906.